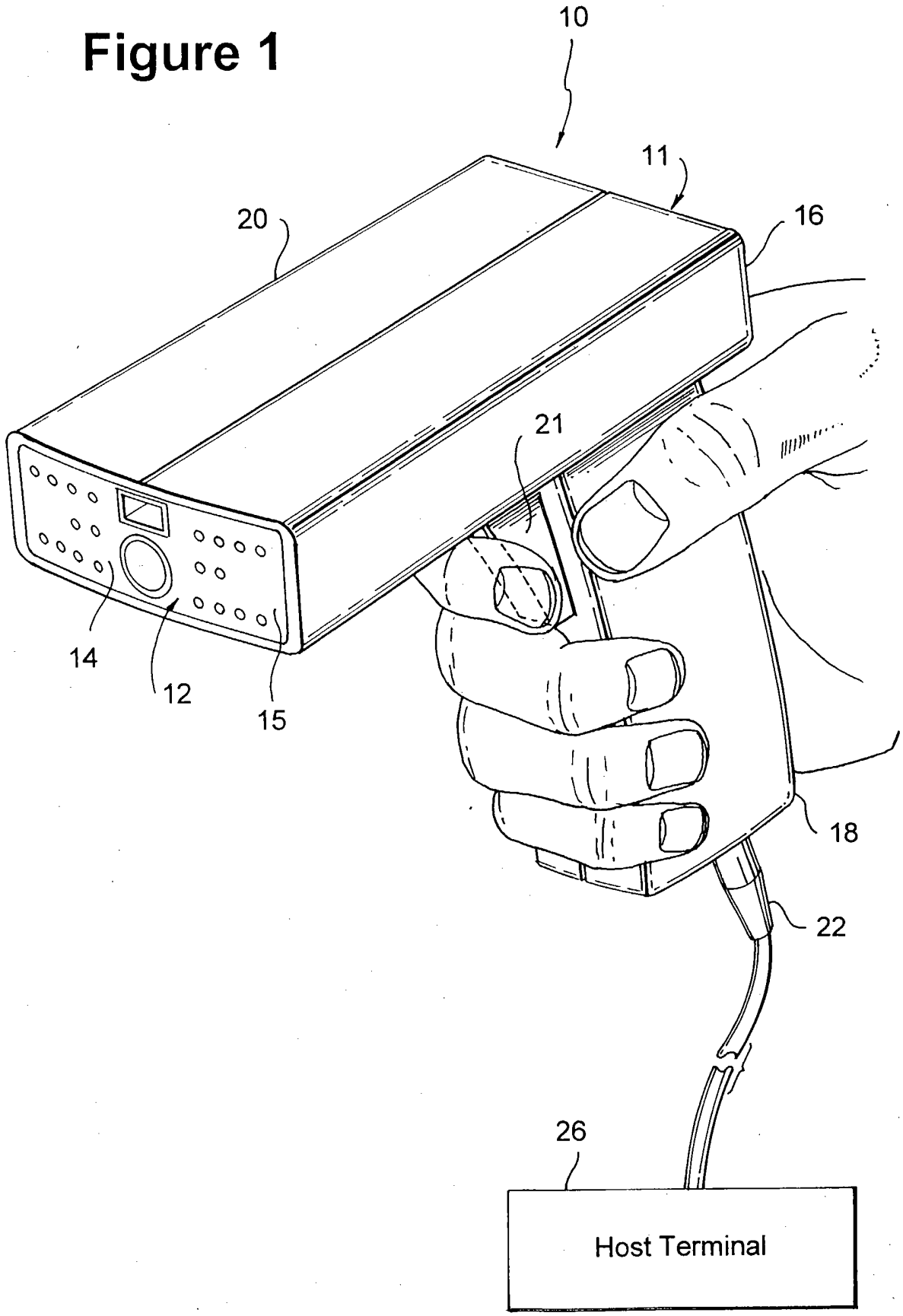
Figure 1



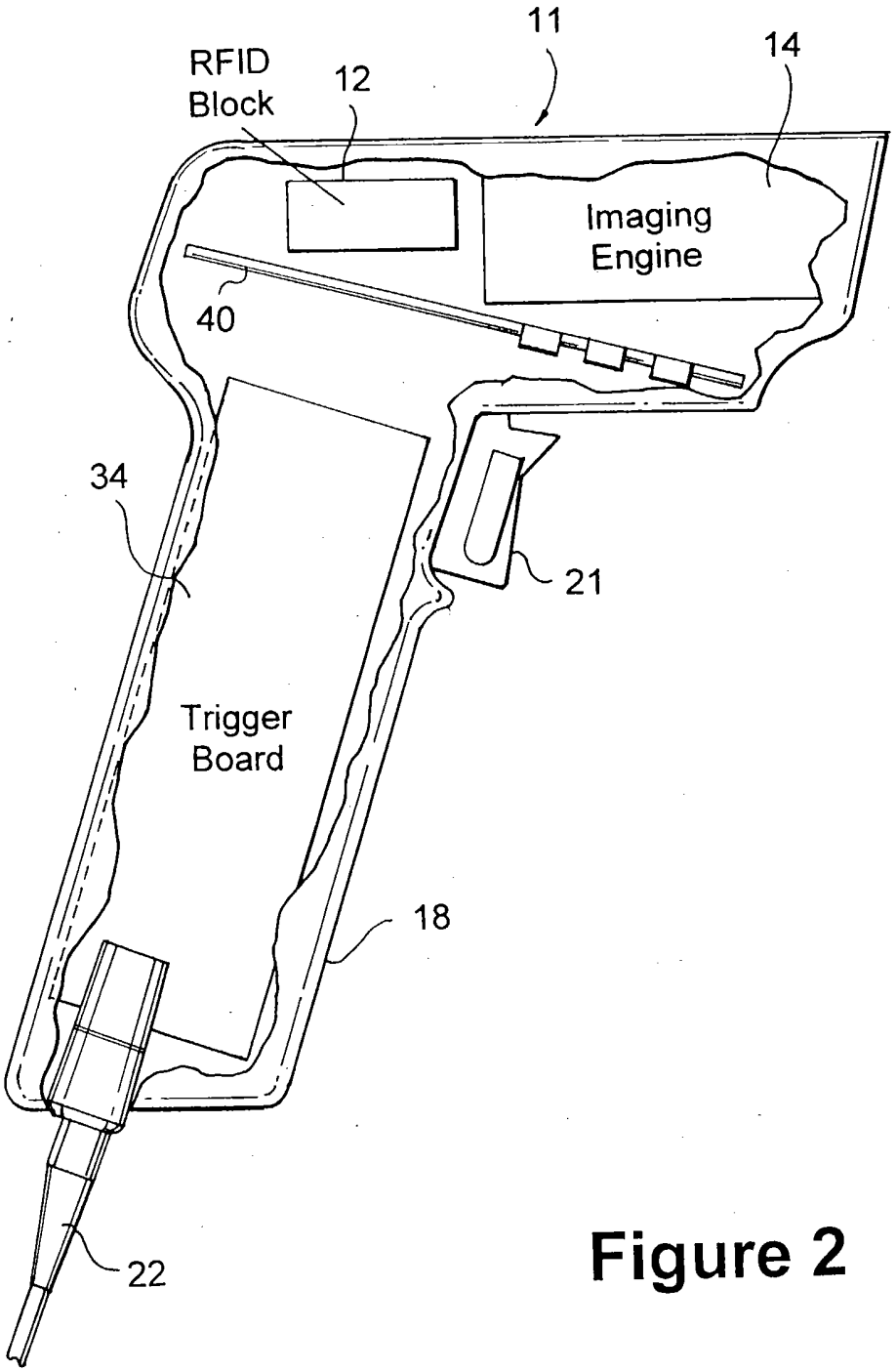

11
RFID
Block
12
14
Imaging
Engine
40
34
21
Trigger
Board
18
22

Figure 2

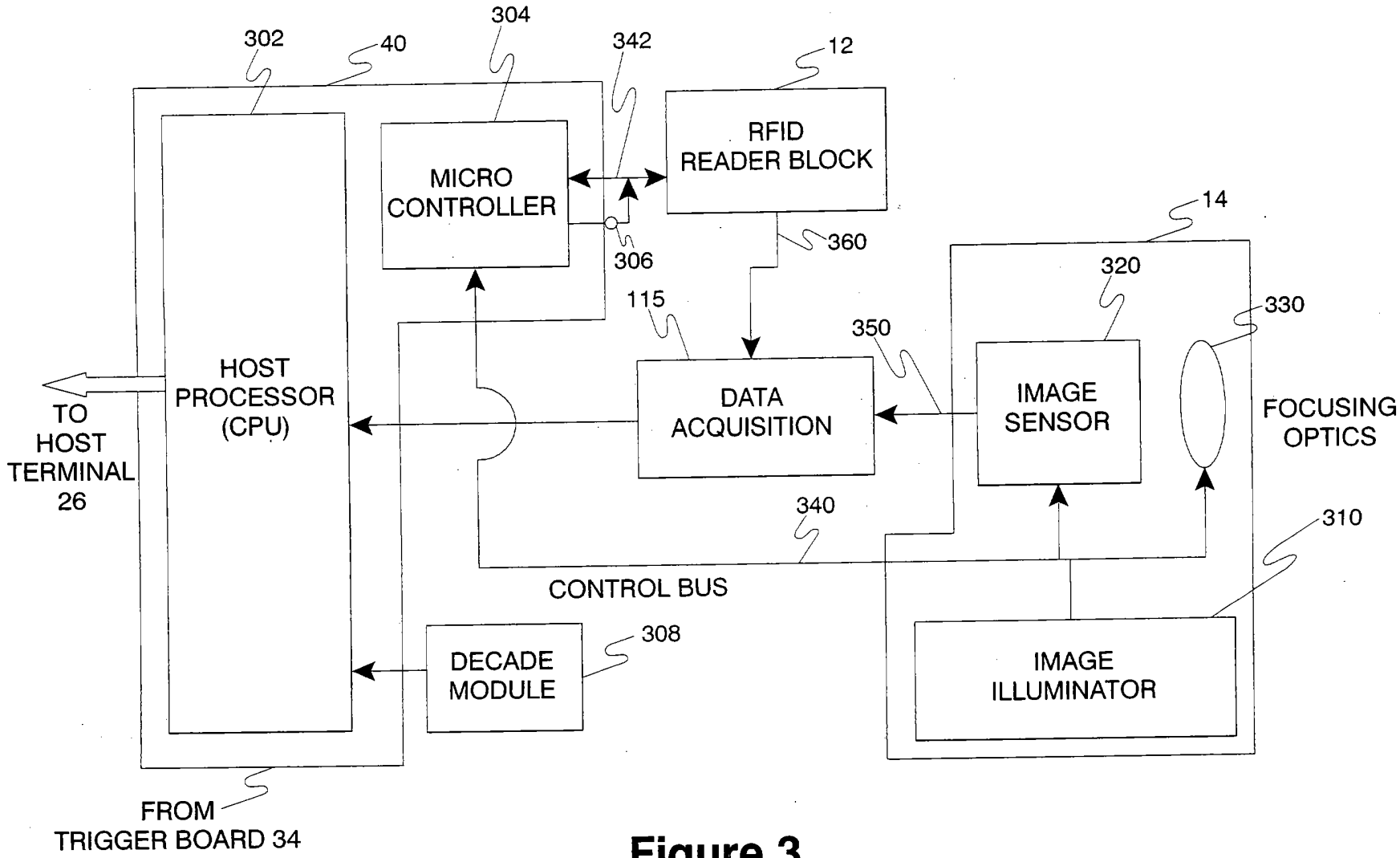

302
40
304
342
12
MICRO CONTROLLER
RFID READER BLOCK
306
360
14
320
330
115
350
HOST PROCESSOR (CPU)
DATA ACQUISITION
IMAGE SENSOR
FOCUSING OPTICS
TO HOST TERMINAL 26
340
310
CONTROL BUS
308
DECADE MODULE
IMAGE ILLUMINATOR
FROM TRIGGER BOARD 34

Figure 3

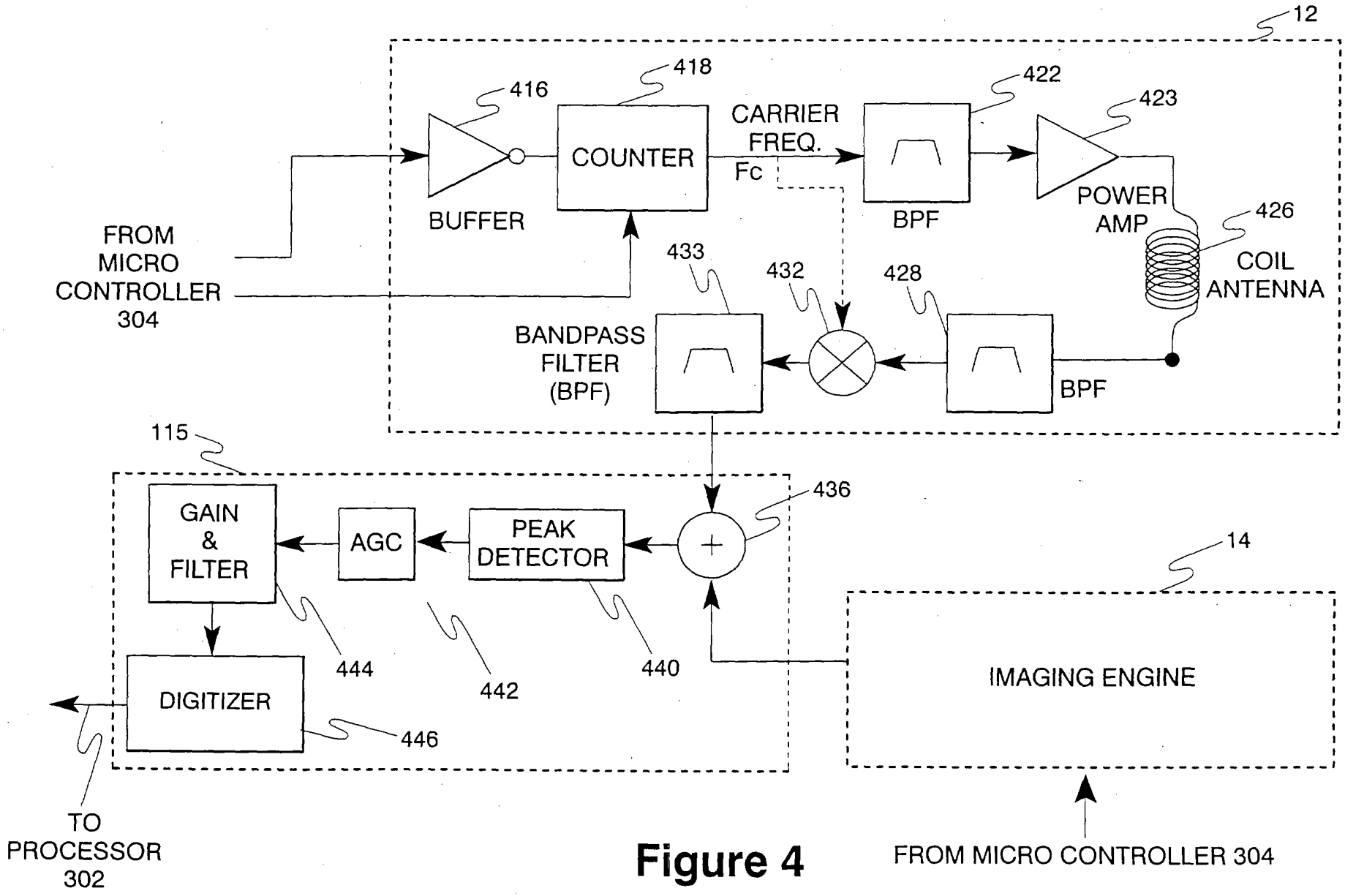

12
416
418
422
423
CARRIER
FREQ.
Fc
COUNTER
BUFFER
BPF
POWER
AMP
426
COIL
ANTENNA
FROM
MICRO
CONTROLLER
304
433
432
428
BANDPASS
FILTER
(BPF)
BPF
115
436
GAIN
&
FILTER
AGC
PEAK
DETECTOR
14
444
442
440
IMAGING ENGINE
DIGITIZER
446
TO
PROCESSOR
302
FROM MICRO CONTROLLER 304

Figure 4

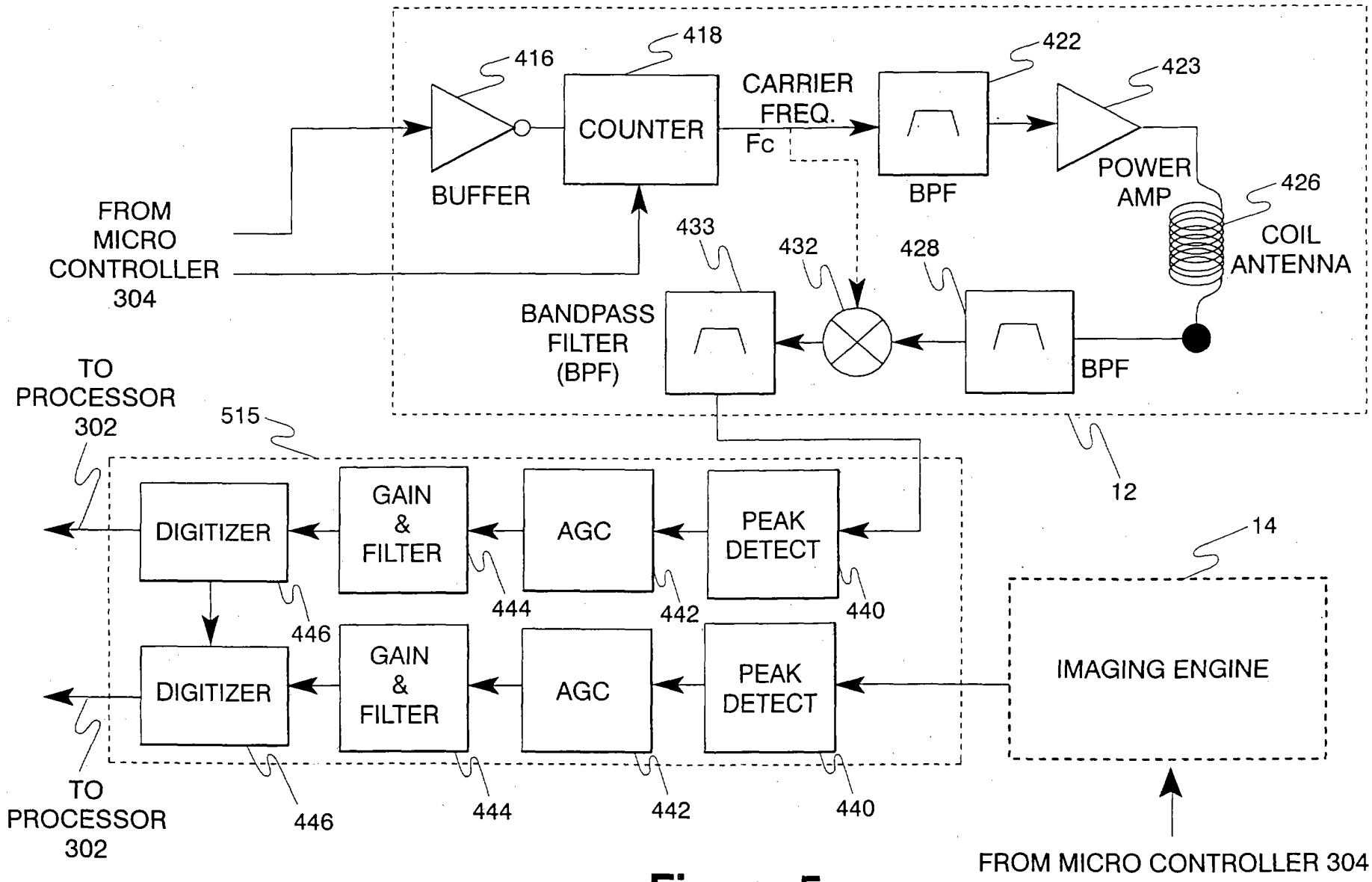

416
418
422
423
CARRIER
FREQ.
Fc
COUNTER
BUFFER
BPF
POWER
AMP
426
COIL
ANTENNA
FROM
MICRO
CONTROLLER
304
433
432
428
BANDPASS
FILTER
(BPF)
BPF
TO
PROCESSOR
302
515
12
DIGITIZER
GAIN
&
FILTER
AGC
PEAK
DETECT
14
444
442
440
446
IMAGING ENGINE
DIGITIZER
GAIN
&
FILTER
AGC
PEAK
DETECT
TO
PROCESSOR
302
446
444
442
440
FROM MICRO CONTROLLER 304

Figure 5

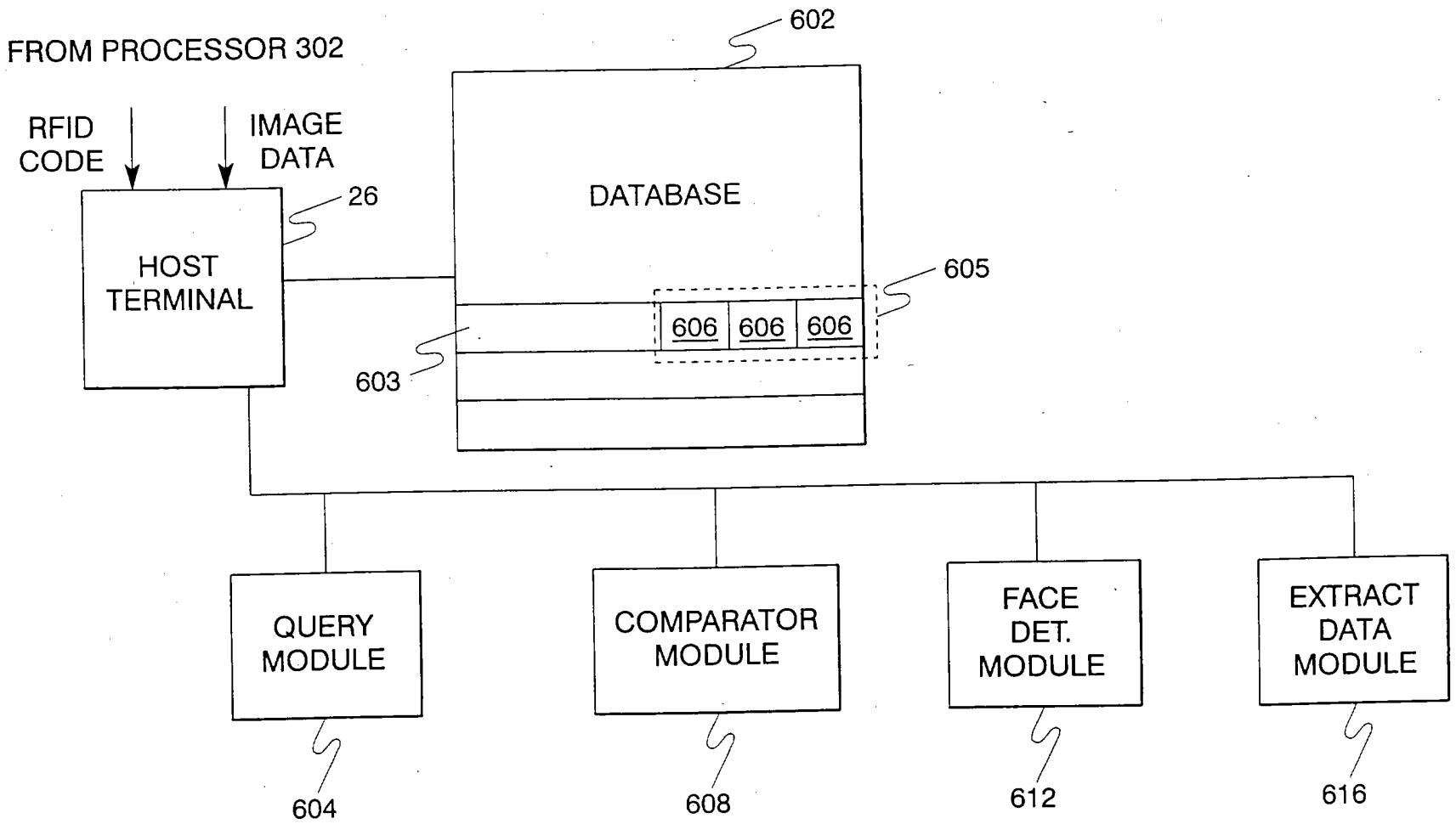

FROM PROCESSOR 302
602
RFID CODE
IMAGE DATA
26
DATABASE
HOST TERMINAL
605
606
606
606
603
QUERY MODULE
COMPARATOR MODULE
FACE DET. MODULE
EXTRACT DATA MODULE
604
608
612
616

Figure 6

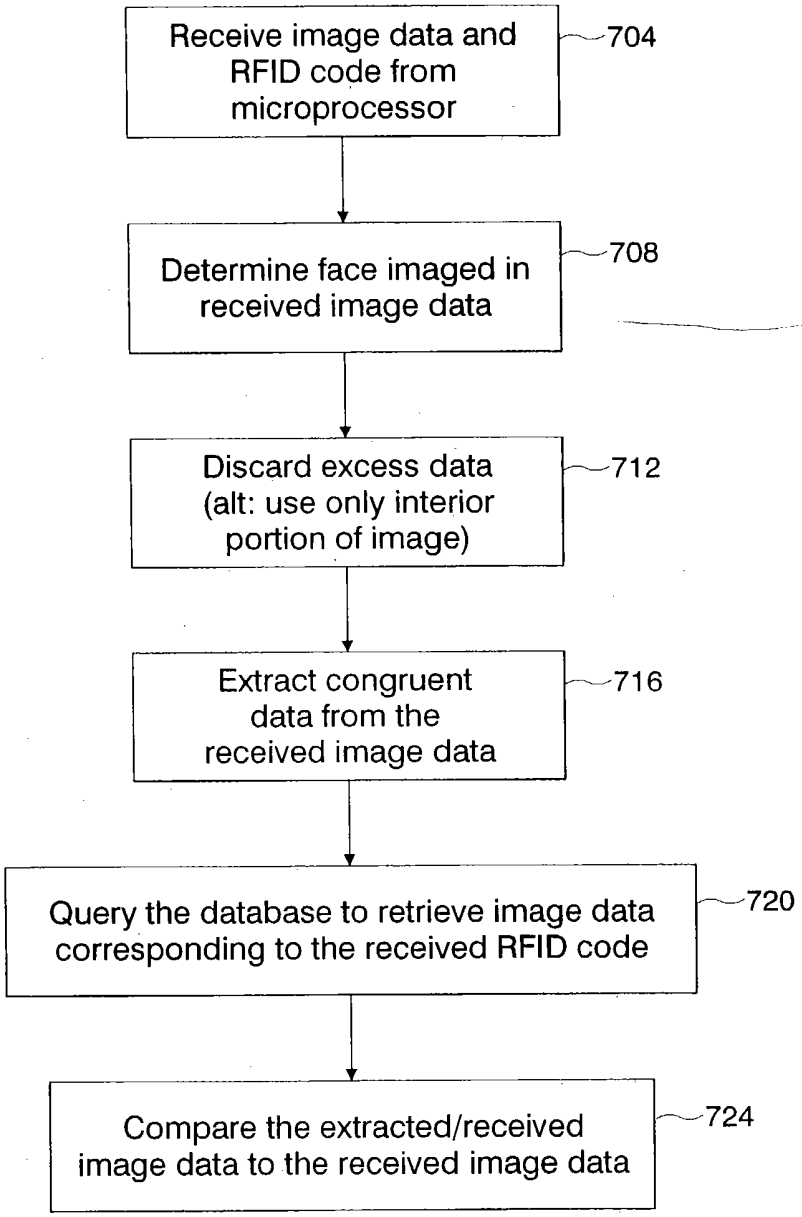

Receive image data and RFID code from microprocessor
704
Determine face imaged in received image data
708
Discard excess data (alt: use only interior portion of image)
712
Extract congruent data from the received image data
716
Query the database to retrieve image data corresponding to the received RFID code
720
Compare the extracted/received image data to the received image data
724

Figure 7

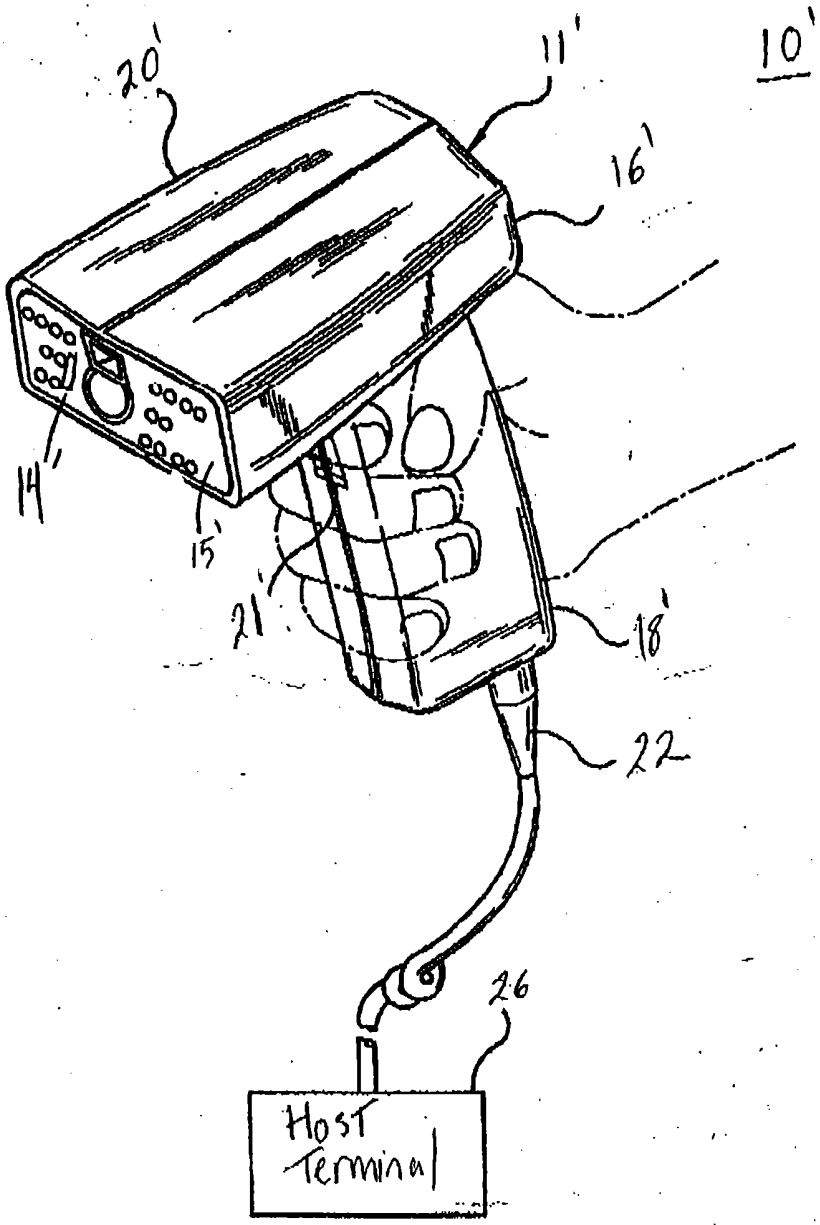


FIG. 8

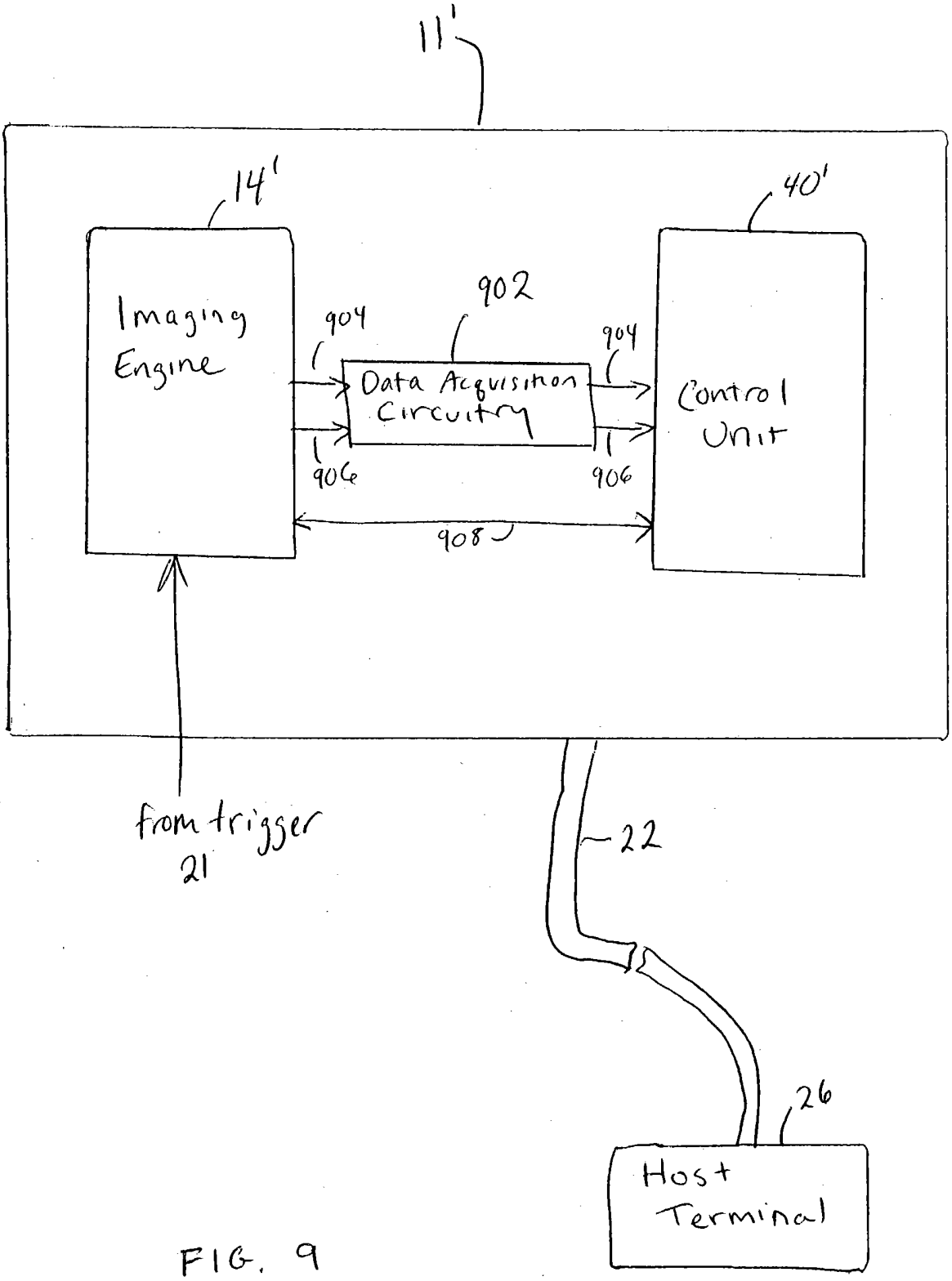

11'
14'
Imaging Engine
902
904
Data Acquisition Circuitry
904
40'
Control Unit
906
906
908
from trigger 21
22
26
Host Terminal

FIG. 9

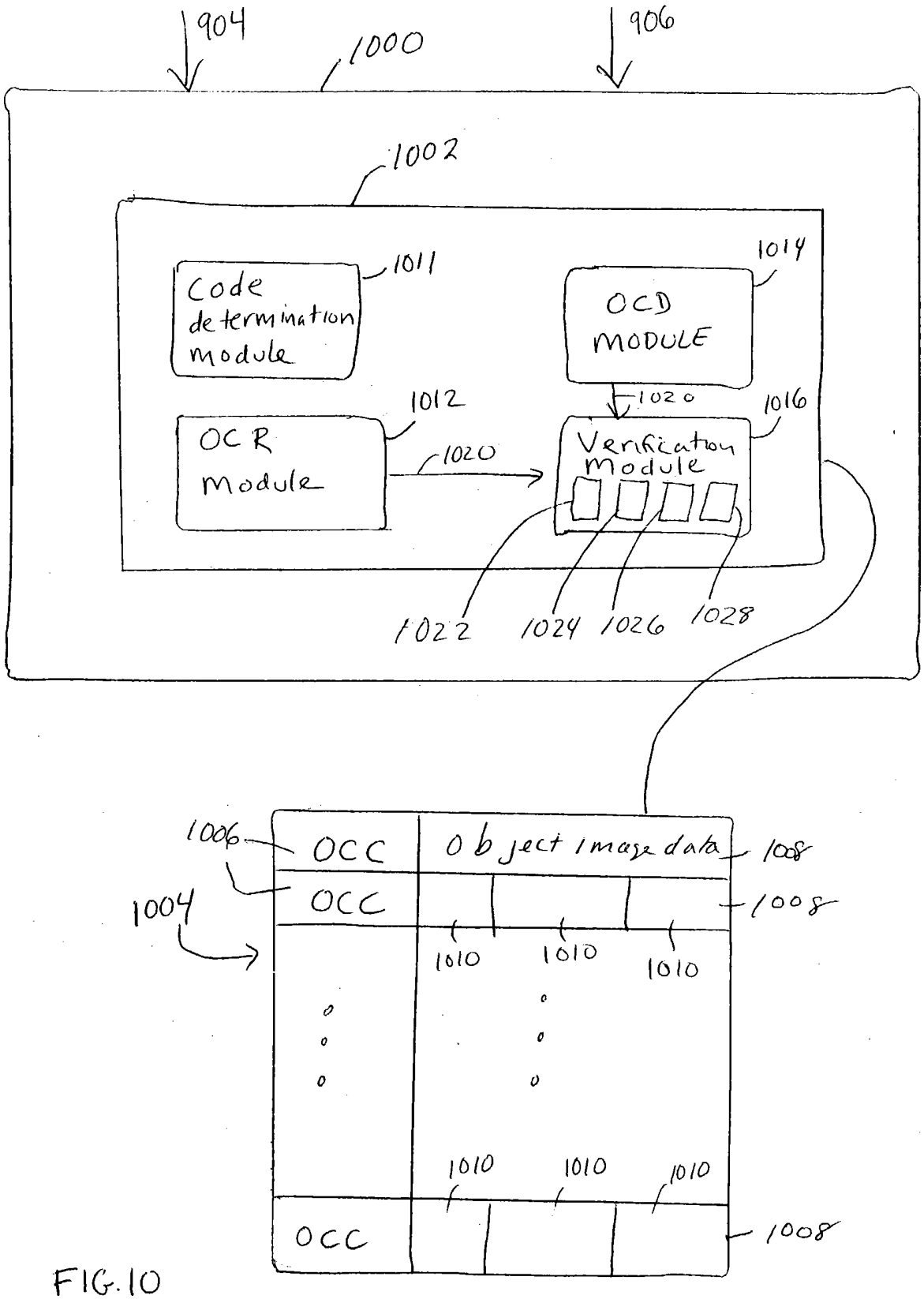

904
1000
906
1002
1011
Code determination module
1014
OCD MODULE
1012
OCR Module
1020
1020
1016
Verification Module
1022
1024
1026
1028
1006
OCC
Object Image data
1008
1004
OCC
1008
1010
1010
1010
1010
1010
1010
OCC
1008

FIG. 10